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Formerly Utilized Sites Remedial Action Program (FUSRAP)

PUBLIC MEETING ON THE LUCKEY SITE PROPOSED PLAN

June 19, 2003

Lieutenant Colonel Jeffrey M. Hall
Commander
Buffalo District

Timothy E. Byrnes
Project Manager

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MEETING PURPOSE

- Present the Luckey Site Proposed Plan
- Obtain public input in the decision-making process.

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AGENDA

- Welcome and Introduction
- Proposed Plan
- Technical Presentation in support of the Proposed Plan
- Comments & Questions

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Introduction

FUSRAP MISSION STATEMENT

- Protect human health and the environment
- Execute the program in the most safe, effective, and efficient manner
- Comply with the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA)

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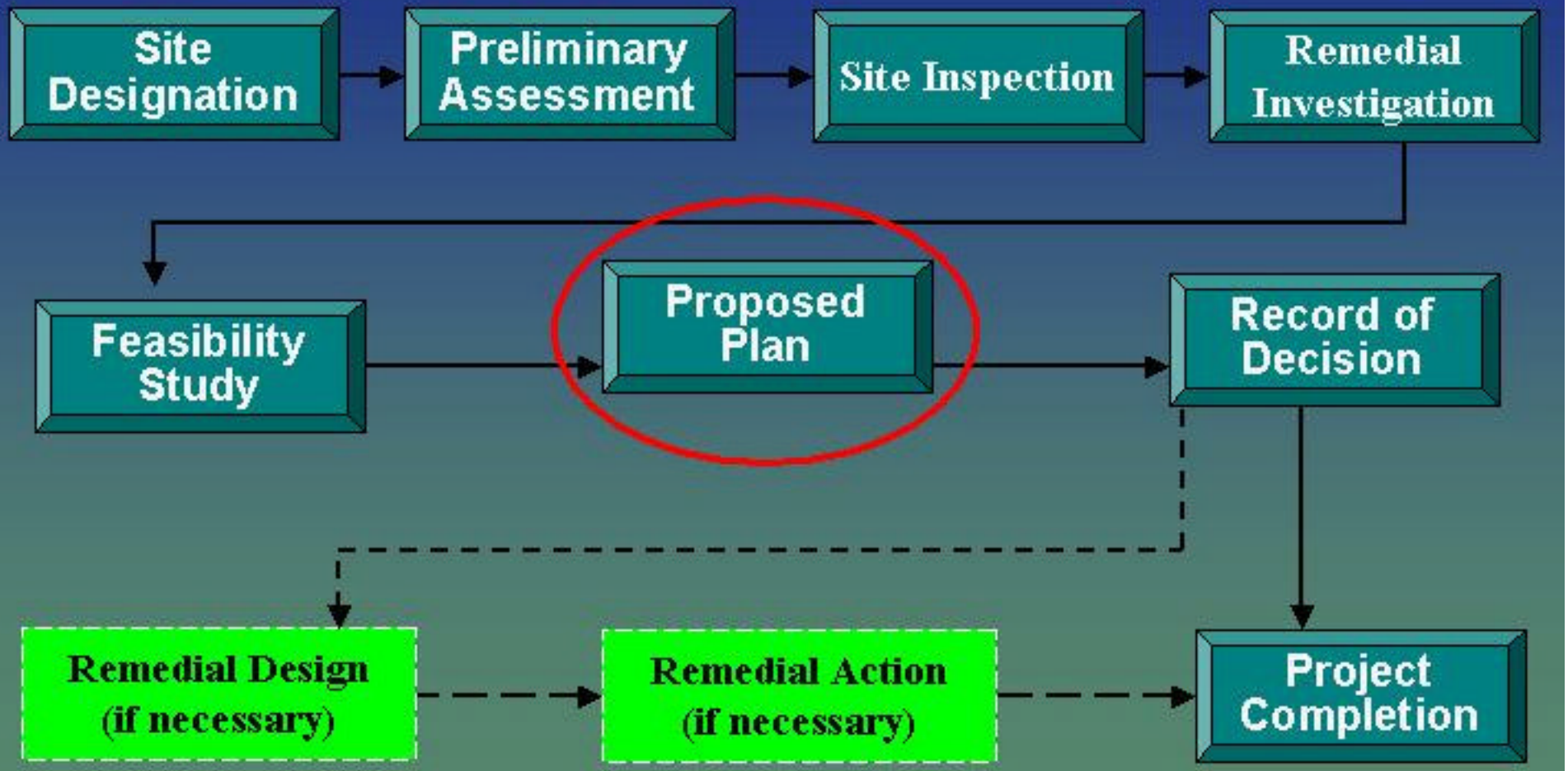
Comprehensive Environmental Response Compensation and Liability Act (CERCLA) Process for FUSRAP



A removal action may be initiated at any time during the process if human health or the environment is in immediate danger.

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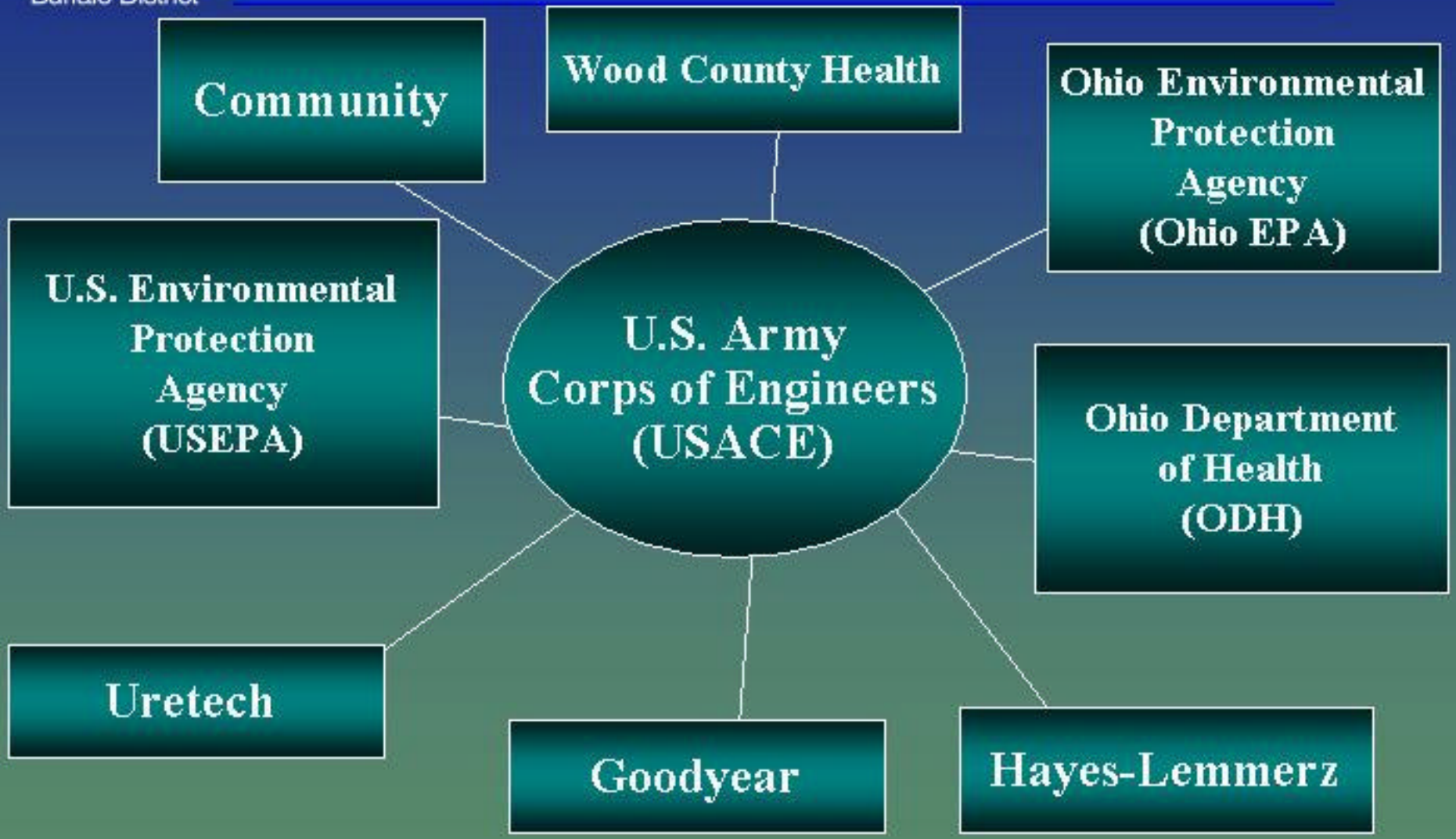
Introduction
Luckey Team



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Introduction

Development of Proposed Plan:

- Public Input During the Comment Period Is Very Important
- No Decision Has Been Made on the Plan

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Preferred Alternative

Alternative 5: Excavation and off-site disposal of impacted soils followed by site restoration.

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Alternative 7: Monitored Natural Attenuation of impacted groundwater with land use controls.

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Outline of Technical Presentation

- General
- History
- Nature and Extent of Contamination
- Process and Criteria
- Remedial Action Alternatives
- Preferred Plan

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Site Photographs

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Luckey Site History

1942 — Magnesium Processing Facility

1949 — AEC Beryllium Processing

1952 — Contaminated Scrap Metal

1962 — Beryllium Processing Ceased

1974 — *FUSRAP* Authorized

1980 — CERCLA

1992 — Luckey Site Entered FUSRAP

1997 — USACE Lead Federal Agency

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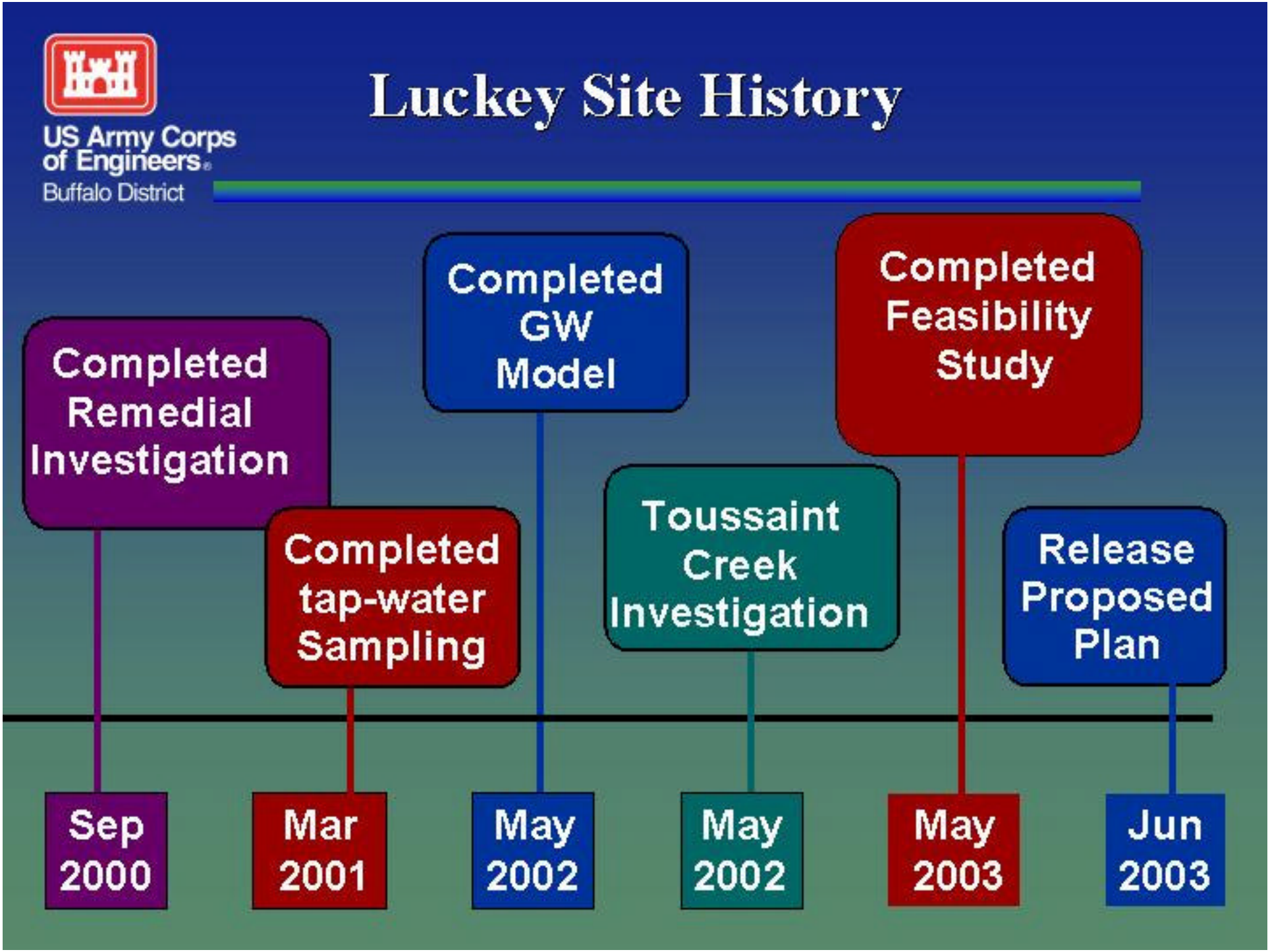
Luckey Site History



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Nature and Extent of Contamination

- Soils: Radium, Thorium, Uranium, Beryllium and Lead
- Groundwater: Uranium, Beryllium and Lead
- Toussaint Sediments: Beryllium and Lead found to pose no unacceptable risk to human health or the environment
- Buildings: Beryllium and radionuclides found to pose no unacceptable risk to human health or the environment

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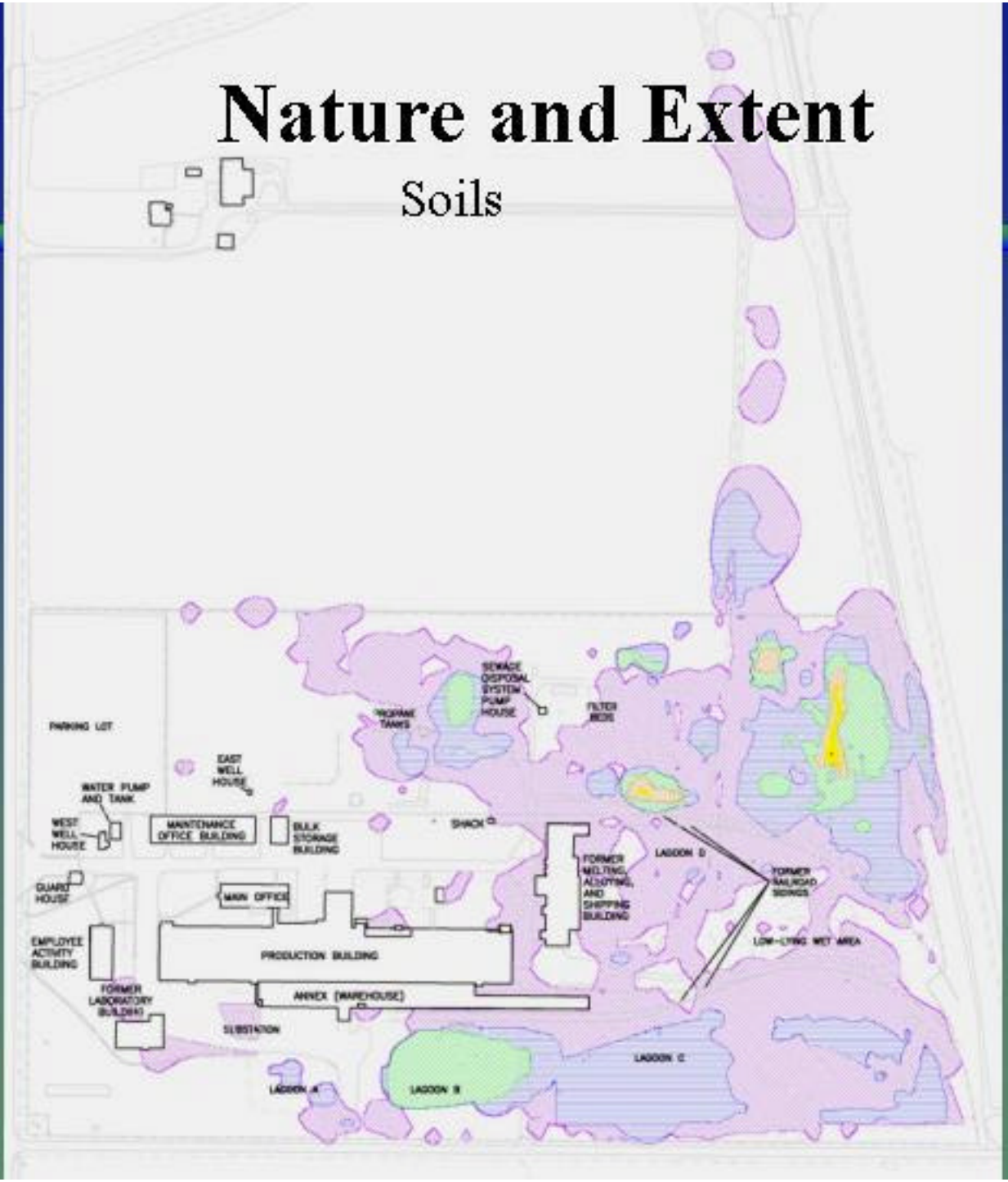
Nature and Extent

Soils



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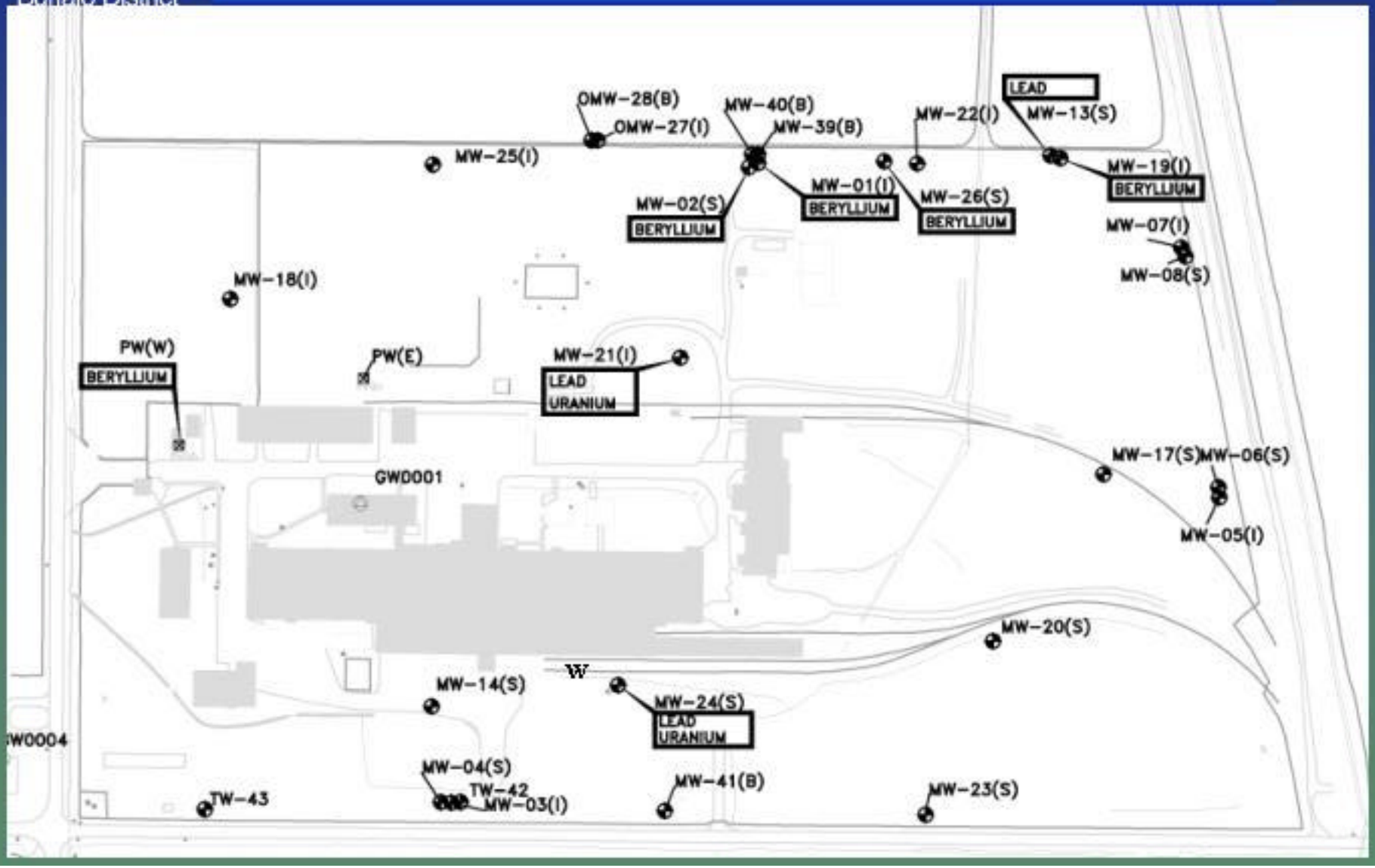
Nature and Extent

Groundwater



Conceptual Model of Groundwater

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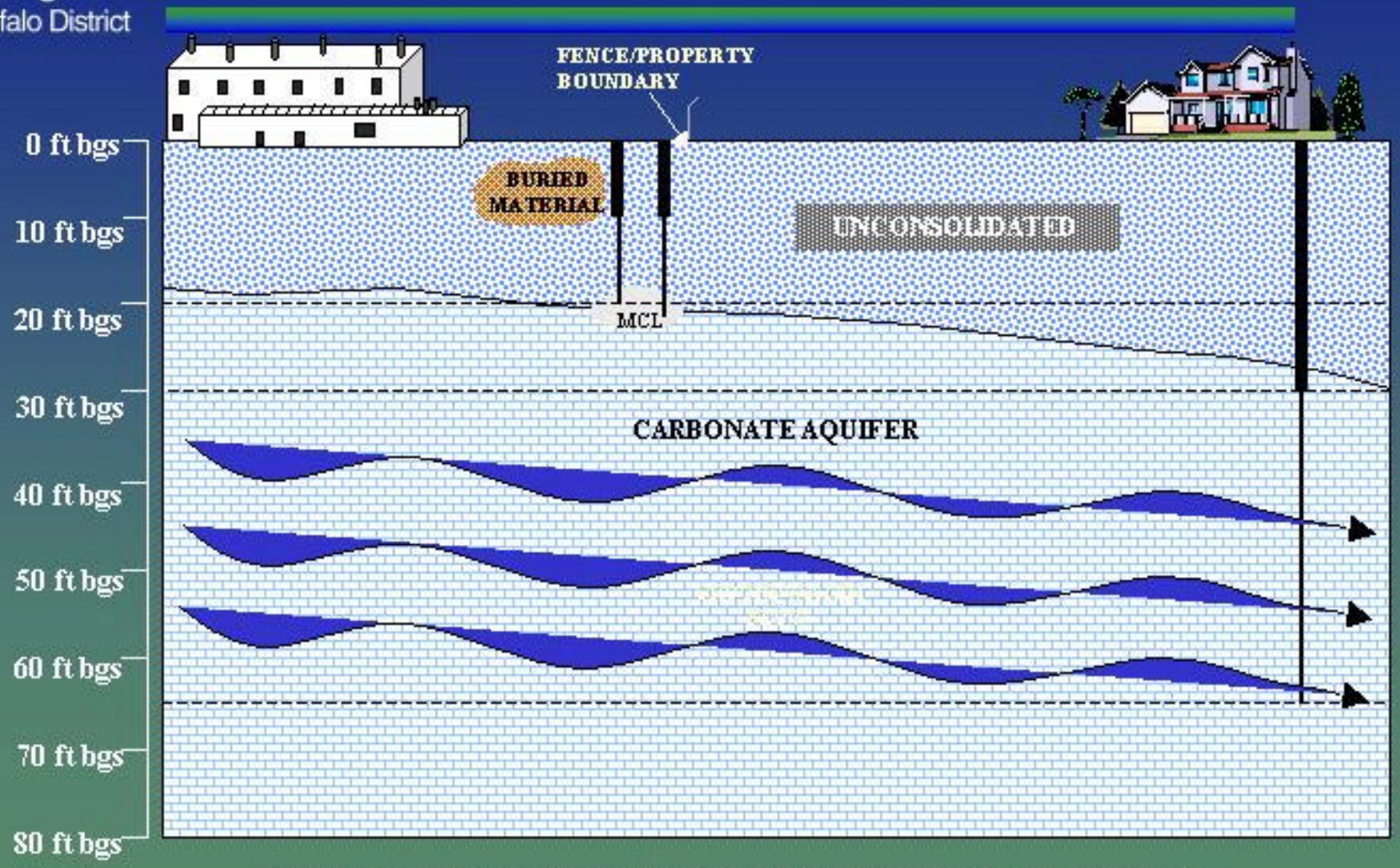

REGIONAL GROUNDWATER FLOW TO THE NORTHEAST

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Cleanup Criteria
Soils

Radionuclides

- 10 Code of Federal Regulations, Part 20, Subpart E
- Ohio Administrative Code 3701:1-38-22

Beryllium & Lead

- Risk based concentrations

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Cleanup Regulations Groundwater

Uranium & Beryllium

Maximum Contaminant Levels

- 40 Code of Federal Regulations, Subpart 141.66(e)
- 40 Code of Federal Regulations, Subpart 141.62(b)
- Ohio Administrative Code 3745-81-11(B)

Lead

National Primary Drinking Water Regulations

- 40 Code of Federal Regulations, Subpart 141.80(c)
- Ohio Administrative Code 3745-81-80(C)(1)

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Cleanup Goals

Contaminant Of Concern	Subsistence Farmer	Maximum Detect
Soils		
Beryllium	131 mg/kg	13,300 mg/kg
Lead	400 mg/kg	28,900 mg/kg
Ra-226	2.0 pCi/g	4,000 pCi/g
Th-230	5.8 pCi/g	88.5 pCi/g
U-234	26 pCi/g	52.3 pCi/g
U-238	26 pCi/g	280 pCi/g
Groundwater		
Beryllium	4 mg/L	137 mg/L
Lead	15 mg/L	46.2 mg/L
Uranium (Total)	30 mg/L	389.9 mg/L

Cleanup Goals/Comparison

Soils

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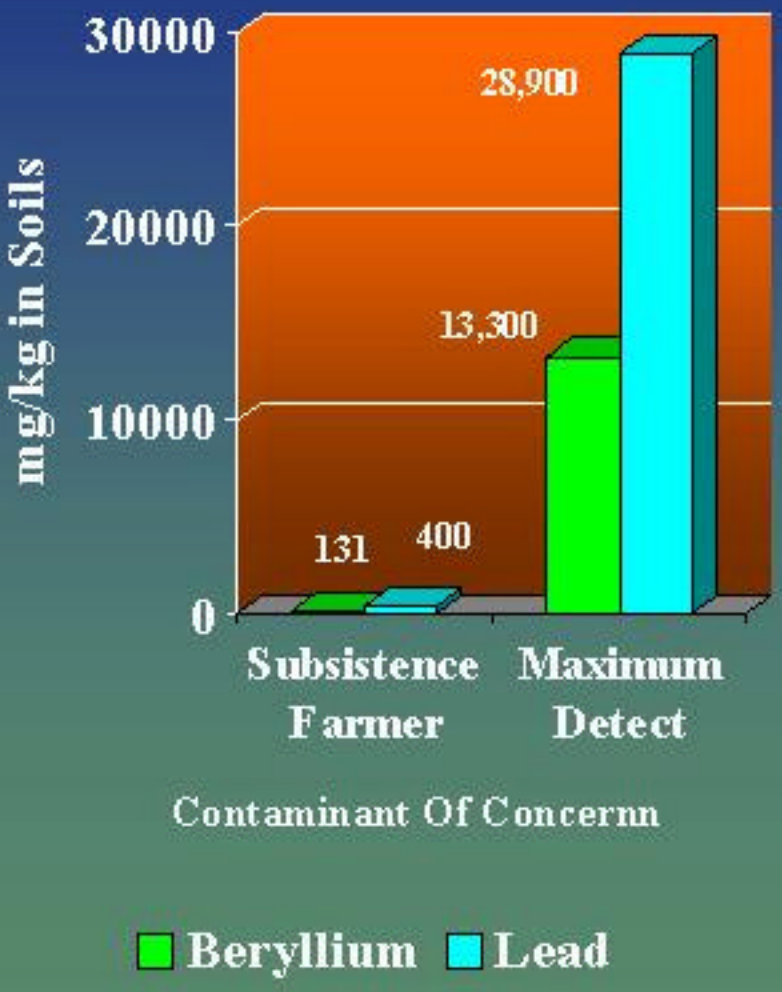

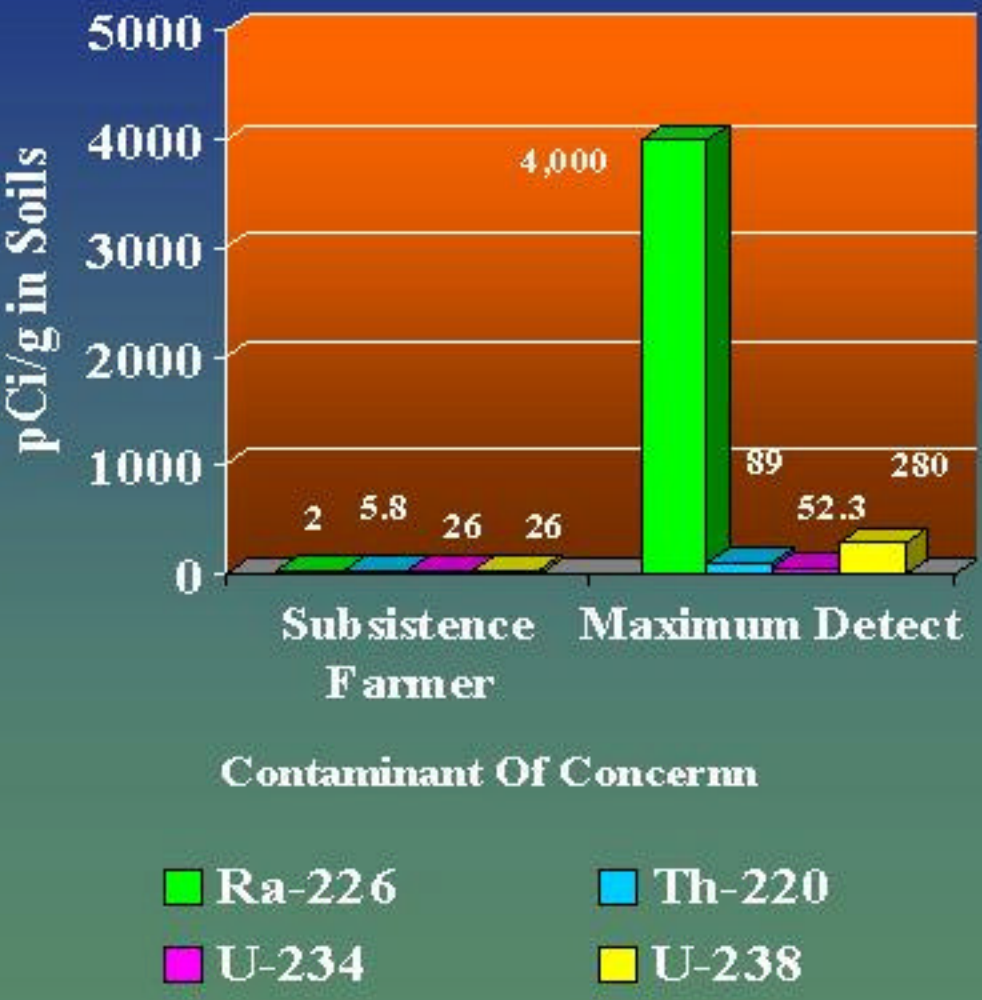

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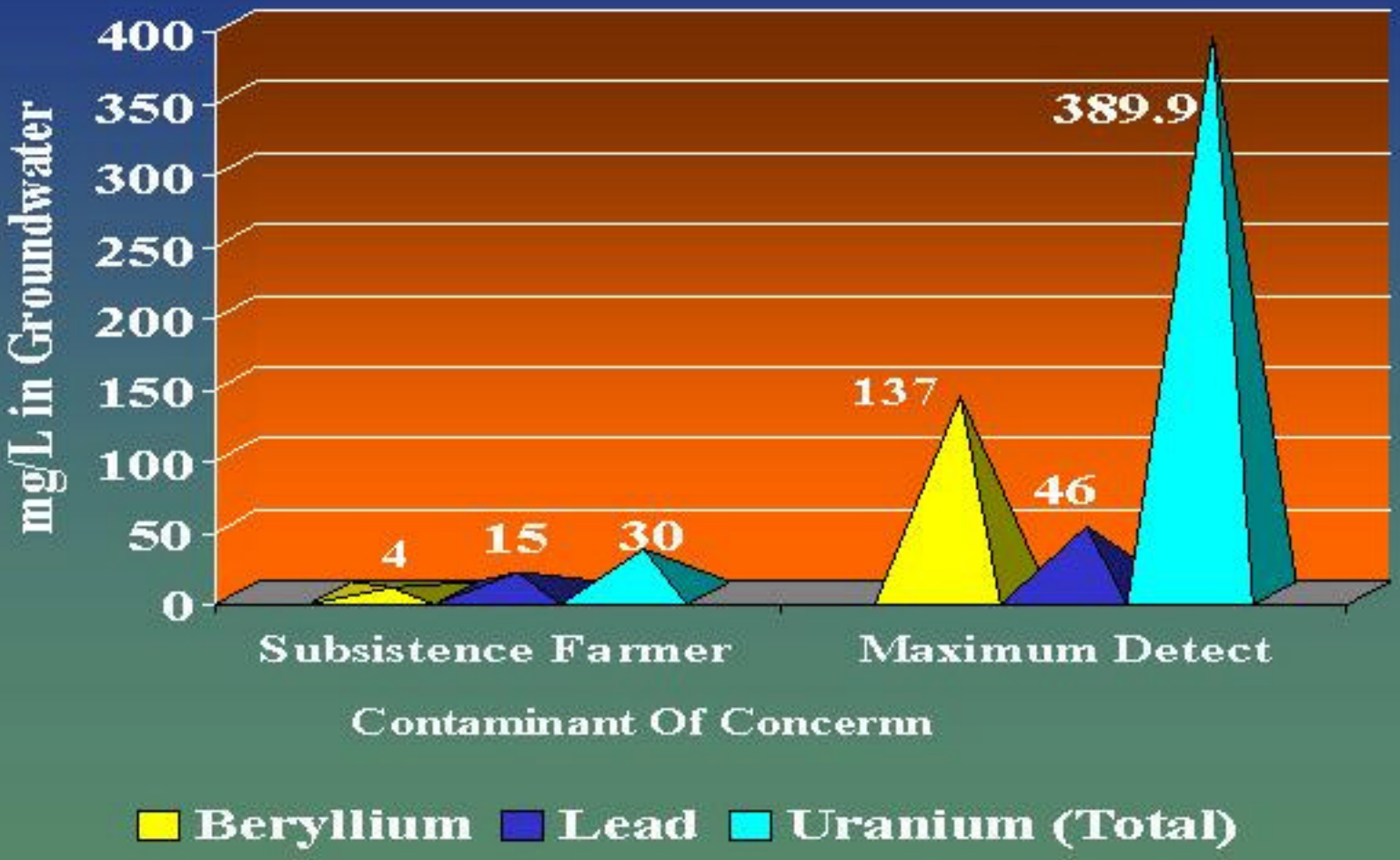
Cleanup Goals/Comparison
Groundwater



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Screening Alternatives

Alternative	Protective	Meets Regulations
Soil		
1 No Action	No	No
5 Excavation	Yes	Yes
6 Excavation, Treatment	Yes	Yes
Groundwater		
7 Natural Attenuation	Yes	Yes
8 Active Treatment	Yes	Yes
9 Electrokinetics	Yes	Yes

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Alternative 5

Excavation of Soils and Disposal

- Removal, offsite disposal, and backfill
- 88,000 cubic yards
- Cost: $36,500,000

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Alternative 6

Excavation of Soils/Treatment/Disposal

- Removal, treatment, offsite disposal, and backfill
- 88,000 cubic yards
- About 33% of total volume may be treated for radionuclide contaminants
- Cost: $42,800,000

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Alternative 7

Monitored Natural Attenuation (Groundwater)

- Groundwater is monitored as contamination naturally degrades
- 40 to 150 years to complete
- Land use controls
- Cost: $800,000

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Alternative 8

Active Groundwater Treatment

- Groundwater pumped from aquifers, treated and discharged
- 40 to 80 years to complete
- Land use controls
- Cost: $3,600,000

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Alternative 9

Electrokinetic Treatment of Groundwater

- Contamination is collected and removed from groundwater by applying electric field across aquifer
- Only treats groundwater above bedrock
- Up to 40 years to complete
- Land use controls
- Cost: $9,300,000

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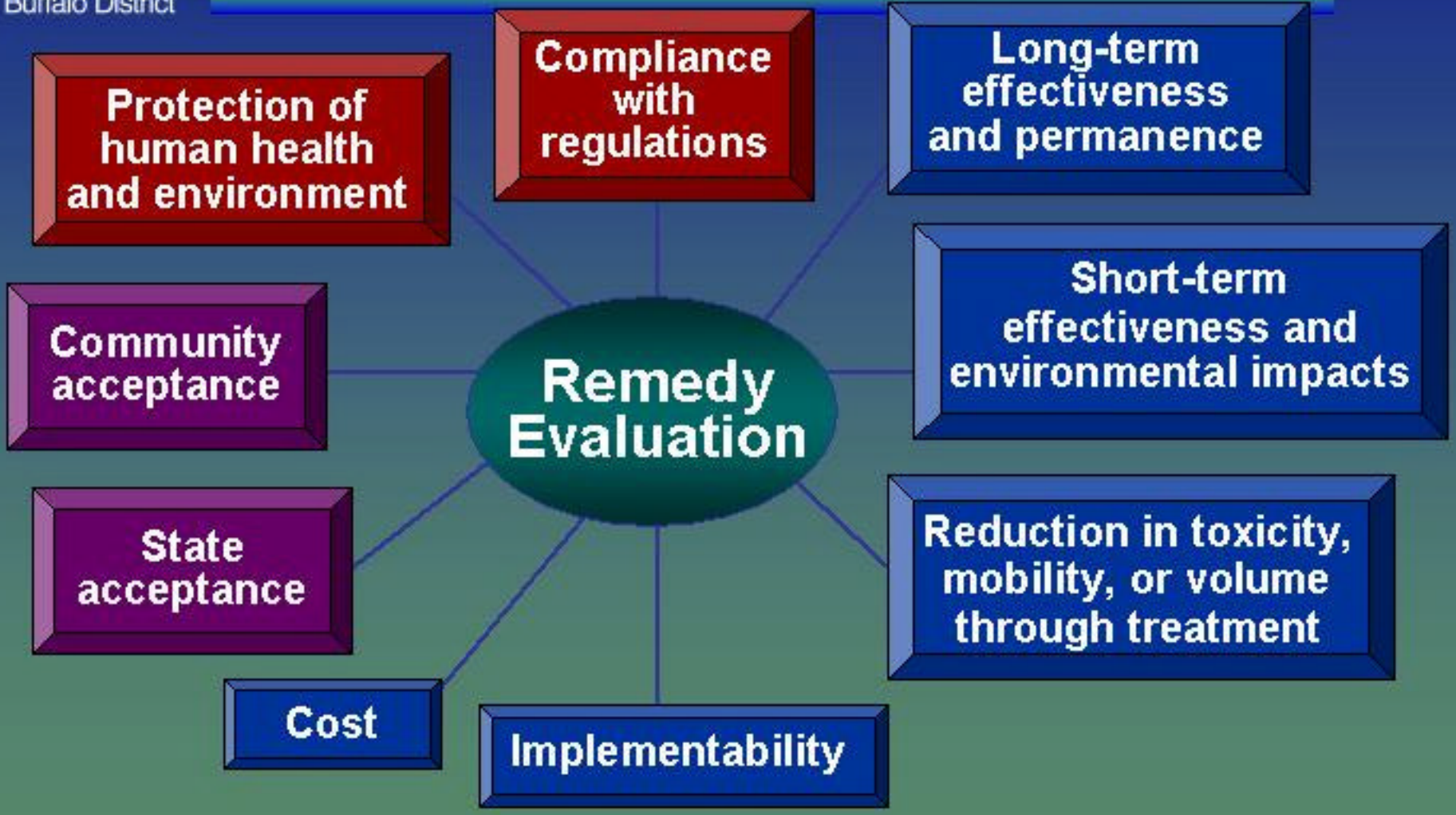
Comprehensive Environmental Response Compensation and Liability Act



Comparative Analysis of Alternatives

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Soils			
NCP Evaluation Criteria	1- No Action	5-Excavation & Off-Site Disposal	6-Excavation , Treatment & Off-Site Disposal
Long-Term Effectiveness and Permanence	Low	High	High
Reduction of Toxicity, Mobility or Volume through Treatment	Low	Low	Medium
Short-Term Effectiveness	Low	Medium	Medium
Time to Complete	0 years	2.9 years	3 years
Implementability	High	High	Medium
Cost	$0	$36,500,000	$42,800,000

Comparative Analysis of Alternatives

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Groundwater			
NCP Evaluation Criteria	7-Monitored Natural Attenuation	8-Active Groundwater Treatment	9-Electrokinetics
Long-Term Effectiveness and Permanence	Medium	High	High
Reduction of Toxicity, Mobility or Volume through Treatment	Medium	High	High
Short-Term Effectiveness	High	Medium	Low
Time to Complete	40 to 150 years	40 to 80 years	40 years
Implementability	High	Medium	Medium
Cost	$800,000	$3,600,000	$9,300,000

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Preferred Alternative

Alternative 5: Excavation and off-site disposal of impacted soils followed by site restoration.

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Alternative 7: Monitored Natural Attenuation of impacted groundwater with land use controls.

Total Estimated Cost: $37,300,000

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Preferred Alternative

Benefits

- Fully protective of Human Health and the Environment both short and long term
- Meets requirements of all relevant regulations and guidelines
- Permanent
- Precludes further potential contamination
- 40 to 150 years natural process then unrestricted release of property
- Can be initiated in a timely manner
- Responsive to community concerns

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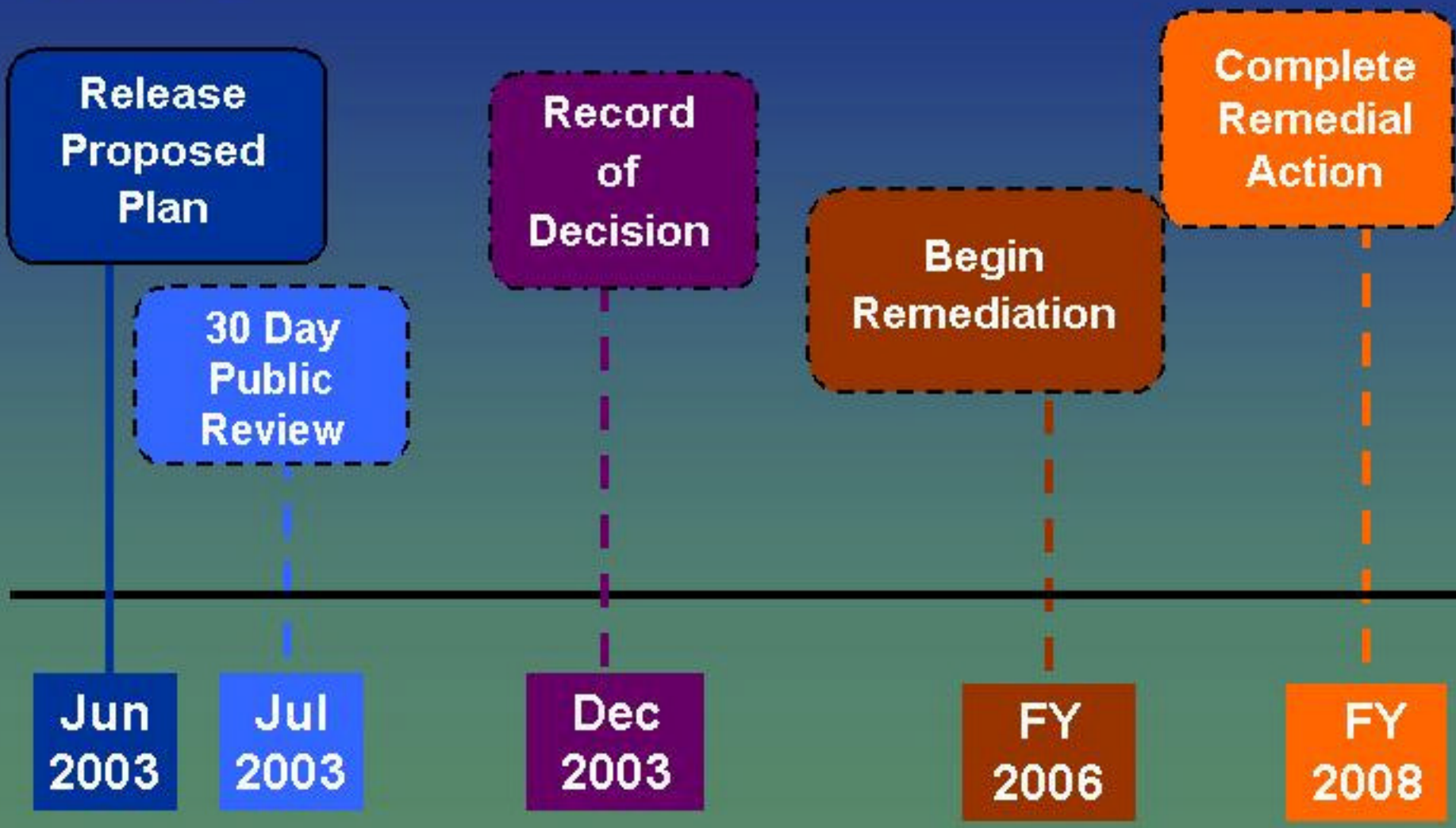
Project Schedule



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Comments

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Comments

We will respond to your comments.

They will become part of the official record and placed in the official Administrative Record that is located at:

Luckey Public Library
228 Main street
Luckey, Ohio 43443

US Army Corps of Engineers
1776 Niagara Street
Buffalo, New York 14207

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Comments Ground Rules

- One person speaks at a time
- State your name and affiliation
- Speakers are limited to five minutes to allow everyone an opportunity to speak
- Please use the microphone when speaking
- Court reporter will be recording proceedings

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Comments

Written comments should be postmarked by July 9, 2003 and mailed to:

U.S. Army Corps of Engineers
FUSRAP Information Center- Luckey
1776 Niagara Street
Buffalo, New York 14207

email us at: fusrap@usace.army.mil

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Thank You for your participation